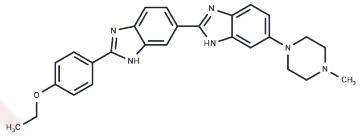
Data Sheet (Cat.No.T5840)

TargetMol

Hoechst 33342

Chemical Properties



CAS No. : 23491-52-3

Formula: C27H28N6O

Molecular Weight: 452.55

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Hoechst 33342 (bisBenzimide H 33342) is a benzimidazole fluorescent dye and a cell-permeable fluorescent DNA dye.
Targets(IC50)	Autophagy
In vitro	1. Preparation of Hoechst 33342 working solution 1. Preparation of stock solution Please use DMSO to prepare 1 mg/mL stock solution of Hoechst 33342. Note: Hoechst 33342 stock solution is recommended to be stored at -4°C or -20°C in the dark after aliquoting. Please avoid repeated freezing and thawing. 2. Preparation of working solution Dilute the stock solution with pure DMEM or PBS to a final concentration of 10 μg/mL Hoechst 33342 working solution. Note: Please adjust the concentration of Hoechst 33342 working solution according to actual conditions. It is recommended that you prepare it for immediate use. 2. Cell staining 1. Suspended cells 1) Collect cells by centrifugation and add PBS to wash the cells twice. Wash gently for 5 min each time. The recommended cell density is 1×106/mL 2) Add 1 mL Hoechst 33342 working solution and incubate at room temperature for 3-10 min. 3) Please use a centrifuge, 400 g, centrifuge for 3-4 min, and discard the supernatant. 4) Add PBS to wash the cells twice, gently, 5 min each time. 5) After resuspending the cells with 1 mL of pure DMEM or PBS, observe using a fluorescence microscope or flow cytometer. 2. Adherent cells 1) Culture the adherent cells on a sterile coverslip. 2) Remove the coverslip from the culture medium and aspirate the excess culture medium, gently. 3) Add 100 μL of Hoechst 33342 working solution, gently shake it to completely cover the cells, and incubate at room temperature for 3-10 min. 4) Aspirate the Hoechst 33342 working solution, wash 2-3 times with pure DMEM, 5 min each time, and observe using a fluorescence microscope or flow cytometer.

In vitro	Notes: 1. You can adjust the working solution concentration of Hoechst 33342 according to your experimental purpose. 2. This product is limited to scientific research and is prohibited from being used for other purposes. 3. For your safety and health, please wear a lab coat and disposable gloves when operating. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 41.7 mg/mL (92.14 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 0.5 mg/mL (1.1 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2097 mL	11.0485 mL	22.097 mL
5 mM	0.4419 mL	2.2097 mL	4.4194 mL
10 mM	0.221 mL	1.1049 mL	2.2097 mL
50 mM	0.0442 mL	0.221 mL	0.4419 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Chazotte, B. Labeling Nuclear DNA with Hoechst 33342[J]. Cold Spring Harbor Protocols, 2011, 2011(1):pdb. prot5557-pdb.prot5557.

Shao C S, Zhou X H, Miao Y H, et al. In-situ observation of mitochondrial biogenesis as the early event of apoptosis. Iscience. 2021, 24(9): 103038.

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Wang W, Zhang Z Q, Zhang Y C, et al.Cayratia albifolia CL Li exerts anti-rheumatoid arthritis effect by inhibiting macrophage activation and neutrophil extracellular traps (NETs).Chinese Medicine.2024, 19(1): 42.

Muhammad M, Shao C S, Nawaz R, et al.Using Label-Free Raman Spectroscopy Integrated with Microfluidic Chips to Probe Ferroptosis Networks in Cells.Applied Spectroscopy.2024: 00037028241292087.